

REMARKS/ARGUMENTS

Claims 1-11 remain in this application. Claims 12-14 are new to this application.

Support for Amendments

Support for amendments changing 20 U to 10 U is at page 7, lines 10-17 of the specification.

Claim Rejections – 35 U.S.C. § 101

Claims 6-8 were rejected under 35 U.S.C. § 101 because the claims were directed to non-statutory subject matter. Claims 7-8 have been amended to recite the phrase “an isolated eukaryotic host cell” as requested by the Examiner and claims 5-6 have been amended to recite the phrase “an isolated prokaryotic host cell.” ~

Claim Rejections – 35 U.S.C. § 112, second paragraph

Claim 1-11 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regard as the invention. Claims 1-11 have been amended to remove the PCR conditions from the claims and to obviate the Examiner's objections to the claims.

New claim 13 has been added to clarify the PCR amplification step in the method for the production of a nucleic acid encoding a phytase. PCR is well known in the art to be useful in identifying polynucleotides encoding particular proteins, here phytases. As the applicant has provided SEQ ID NO: 1 and specific PCR conditions to be used, it would be routine for one of ordinary skill in the art to utilize SEQ ID NO: 1 to identify polynucleotides that would hybridize to SEQ ID NO: 1 or a complement thereof and use those polynucleotides in PCR to identify an isolated nucleic acid encoding a phytase.

Claim Rejections – 35 U.S.C. § 112, first paragraph

Claims 1-11 were rejected under 35 U.S.C. § 112, first paragraph, for lack of enablement. The amount of experimentation necessary to identify specific nucleic acid sequences that hybridize to SEQ ID NO: 1 under the recited hybridization conditions of the present invention would be very routine for one of ordinary skill in the art. One of ordinary

skill could easily carry out a Southern blot hybridization experiment to identify an isolated nucleic acid encoding a phytase using the conditions as claimed. It is well known in the art that any sample of genomic or other source of DNA can be probed by Southern blot to detect the presence of a gene, here a nucleic acid encoding a phytase.

Additionally, new claims have been added to precisely define the method of producing a nucleic acid encoding a phytase by PCR. One of ordinary skill of art could easily select oligonucleotides that hybridize to SEQ ID NO: 1 or a complement thereof. One of ordinary skill could then easily carry out PCR under the claimed conditions with a sample suspected of encoding a phytase. The amount of experimentation needed to identify a nucleotide encoding a phytase as claimed would merely be routine for one of ordinary skill in the art.

Further, claims 7 and 8 were rejected because the specification does not enable one skilled in the art to make and/or use any eukaryotic host cell, eukaryotic organism, plant, transgenic eukaryotic organism, or transgenic plant transformed with any nucleic acid that hybridizes to SEQ ID NO: 1 under the recited conditions. Claims 7 and 8 have been amended to encompass an "isolated eukaryotic host cell." Applicant respectfully submits that transformation of an isolated eukaryotic host cell with a nucleic acid is well known in the art and would not require any undue experimentation.

Claim 10 was further rejected because the Examiner contends the claim contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to make and/or use the invention. Claim 10 has been amended to limit the scope of the claim to hybridization for Southern blotting utilizing a nucleic acid of SEQ ID NO. 1 as a probe and new claim 13 has been added to clarify the method for the production of a nucleic acid by PCR.

#### Double Patenting

Provided herewith is a Terminal Disclaimer that obviates the obviousness-type double patenting rejection over U.S. Patent No. 6,638,746.

Application No. 10/669,781  
Reply to Office Action of September 12, 2005

CONCLUSION

Applicant respectfully submits that the current claims patentably define the invention over the references and requests that a timely Notice of Allowance be issued in this case. The Commissioner is hereby authorized to charge any additional fees which may be required in the Application to Deposit Account No. 06-1135.

Respectfully submitted,

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